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DRAFT OSC REPORT
FOR
CERCLA REMOVAL ACTION
SAUGET LANDFILL, SITE Q
SAUGET, St. CLAIR COUNTY, ILLINOIS
U.S. EPA ID: ??
TDD No.: T05-9502-010
PAN : EIL0837FAA

June 15, 1995

Prepared for:

Gail Nabasny
Deputy Project Officer
Emergency Support Section
EPA - REGION V

Contract Number: 68-WO-0037

Prepared by: _____ Date: _____
Reviewed by: _____ Date: _____
Approved by: _____ Date: _____

Date: June 15, 1995

To: Gail Nabasny, Deputy Project Officer
Region V Emergency and Enforcement
Response Branch

From: Sammy Sirhan, CHMM
Region V Technical Assistance Team

Subject: Draft On-Scene Coordinator's Report for
Sauget Landfill, Site Q
Sauget, St.Clair County, Illinois
TDD No. T05-9502-010
PAN EIL0837FAA
Site ID# ??

cc: Samuel Borries, On-Scene Coordinator
Region V Emergency and Enforcement
Response Branch

Attached is a draft On-Scene Coordinator's Report (OSC Report) for the removal actions at the Sauget Landfill, Site Q in Sauget, St. Clair County, Illinois. The report was prepared in accordance with the U.S. EPA Office of Emergency and Remedial Response publication number 9360.3-03, dated June 1994. With the submission of this report, the TAT has completed all activities requested for TDD No. T05-9502-010.

Both a 5.25 and a 3.5 inch floppy disks containing electronic copies of the draft OSC Report in Wordperfect 5.1 format have been submitted to the U.S. EPA OSC along with a paper copy of this report. The TAT completed an "Environmental Indicators Data Entry Document" for this removal action and was included in the above-mentioned submittal.

OSC appendices have been organized according to the guidelines of the August 30, 1993 Revised OSC Report Desk Procedures and were submitted to the OSC on June 15, 1995.

ATTACHMENTS:

A. Transmittal Memorandum
B. Draft On-Scene Coordinator's Report
C. Selected Site Photographs

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

SUBJECT: ON-SCENE COORDINATOR'S REPORT - Removal Action at the Sauget Landfill, Site Q in Sauget, St. Clair County, Illinois, Site ID# ??

FROM: Rick Karl, Chief
Emergency and Enforcement Response Branch, HSE-5J

TO: Debbie Dietrich, Acting Director
Emergency Response Division, 0S-210

THRU: Jodi Traub, Acting Associate Division Director
Office of Superfund, HS-6J

Attached is the On-Scene Coordinator's (OSC) Report for the removal action conducted at the Sauget Landfill, Site Q in Sauget, St. Clair County, Illinois. The report follows the format outlined in the National Oil Pollution and Contingency Plan (NCP), Section 300.165. This removal began on January 25, 1995, and was completed on May 15, 1995. The OSC for this removal action was Samuel Borries.

The Sauget Landfill, Site Q is a former surface/subsurface disposal area which occupied approximately 90 acres on the east bank of the Mississippi River. The site is located in the floodplain of the Mississippi River. During floods of 1993 the site area was submerged under approximately six feet of water. The flood water eroded the site original cover and exposed bulk hazardous substances and deteriorated drums to the surface. On May 27, 1994, U.S. EPA Samuel Borries accompanied by TAT contractor performed a site inspection visit to evaluate site conditions after the flood. Results of samples collected from the exposed waste drums indicated the presence of polychlorinated biphenyl at levels in the range of 180,000 to 260,000 parts per million (ppm). The exposed drums and waste were located approximately 100 feet west of the Mississippi River in an up-gradient position. According to Illinois Environmental Protection Agency's (IEPA) file information, the Mississippi River is a primary drinking water source for numerous communities down-river from the site location.

The U.S. EPA conducted a funded removal action at the site which entailed the removal and off-site disposal of approximately 311 tons of PCB-contaminated soil, restoration of the landfill cover, and reinforcing the site cover with gravel bed to minimize future erosion. Costs under the control of the OSC are estimated at $184,589.73 of which $139,348.13 was for the Emergency Response Cleanup Services (ERCS) contractor.

Any indication in this OSC Report of specific costs incurred at the site is only an approximation, subject to audit and final definitization by the U.S. EPA. The OSC Report is not a final reconciliation of the costs associated with a particular site.

Portions of the OSC Report appendices may contain confidential business or enforcement-sensitive information and must be reviewed by the Office of Regional Counsel prior to release to the public.

This site is not on the National Priorities List.

Attachment

cc: L. Welch, Ohio EPA, w/OSC Report
T. Johnson, U.S EPA, OERR, OS-210, w/OSC Report

bcc: B. Warning, Site Attorney, CS-3T, w/OSC Report
T. Lesser, P-19J, w/OSC Report

O. Warnsley, CRU, HSM-5J, w/OSC Report
R. Freeman, U.S. EPA State Coordinator, R-19A, w/OSC Rpt
T. Connell, 5SPT (if PCB site)
R. Mayhugh, HSC-9J, w/OSC Rpt (20 copies for RRT distribution
B. Ramsey, Secretary, NRT, OS-120
V. Simon, OSC, w/OSC Report
R. Bowden, w/OSC Report
M. O'Mara, ESS, w/OSC Report
R. Powers/R. Buckley (RS1), w/OSC Report
D. Bruce, (RS2), w/OSC Report
F. Rollins (RS3), w/OSC Report
EERB Site File, 5HS-12, w/OSC Report (5)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

FEDERAL ON-SCENE COORDINATOR'S REPORT

Sauget Landfill, Site Q
Sauget, St. Calir County, Illinois

January 25 - May 15, 1995

EXECUTIVE SUMMARY

SITE: Sauget Landfill, Site Q

LOCATION: Sauget, St. Clair County, Illinois.

PROJECT DATES: January 25 - May 15, 1995

INCIDENT DESCRIPTION: Sauget Landfill, Site Q is a former surface/subsurface waste disposal facility which started operation in 1962 and was ~~discontinued~~ closed in 1975. The site is one of 12 uncontrolled hazardous waste sites that form the Dead Creek Project (DCP) in the area. The site occupies approximately 90 acres located in the floodplain and immediately on the west bank of the Mississippi River. The site is bordered by DCP Site R and old Sauget Power Plant on the north; the Illinois Central Gulf Railroad and United States Corps of Engineers river levee on the east; Mississippi River on the west; and agricultural land on the south ~~(see Site Location Map, Figure 1-1)~~. The Mississippi River is a primary drinking water source for numerous communities down-river from the site location. The land use of the area surrounding the site is primarily industrial.

During floods of 1993, the site was submerged under approximately six feet of water. The flood water eroded the original cover material of the landfill and ~~exposed~~ a number of deteriorated waste drums. On May 27, 1994, ~~the U.S. EPA~~ OSC accompanied by TAT contractor performed a site inspection visit to evaluate site conditions after the flood period. Results of waste samples collected by TAT during the visit indicated levels of PCBs in the range of 180,000 to 260,000 ppm. The detected levels exceeded the 50 pmm Toxic Substances Control Act (TSCA) action level for PCBs. Due to conditions ~~that was~~ prevailing at the site and in accordance with Paragraph (b)(2) of Section 300.415 of the National Oil Pollution Contingency Plan (NCP), the U.S. EPA initiated a funded removal at the site to protect the public health and the environment.

ACTIONS TAKEN: The U.S. EPA began a removal action on January 25, 1995. The removal action included the following activities:

* Extent of contamination determination for the landfill area and the beach area alongside the Mississippi River west bank.

* Removal and off-site disposal of approximately 311 tons of PCB-contaminated soil and beach sand.

* Construction of a soil cover over the decontaminated area. The soil cover was reinforced with surface run-off control by spreading a ~~six~~ three-inch gavel layer to minimize future erosion.

Removal activities were completed on May 15, 1995, at an estimated cost under the control of the OSC of $184,589.73 of which $139,348.13 was for the Emergency Response Cleanup Services (ERCS) contractor. The On-Scene Coordinator for this removal was Samuel Borries.

Samuel Borries, On-Scene Coordinator — Date
Emergency and Enforcement Response Branch
Region V United States Environmental Protection Agency

Add page for site location map

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I. SUMMARY OF EVENTS

A. Site Conditions and Background

1. Initial Situation

The Sauget Landfill, Site Q, is a former surface/subsurface disposal area located in Sauget, St. Clair County, Illinois. Site Q is one of approximately 12 uncontrolled hazardous waste site that form the Dead Creek Project (DCP) in the area. The site is located on the floodplain of the Mississippi River, approximately 100 feet due west. The location of the site is defined by north latitude 38°35'23" and west longitude 90°11'46". The site is bordered by DCP Site R and old Sauget Power Plant on the north; the Illinois Central Gulf Railroad and a U.S. Corps of Engineers river levee on the east; agricultural land on the south; and the Mississippi river on the west (see Site Location Map, Figure 1-1). The surface of Site Q is littered with demolition debris and metal waste. Surface run-off from the site area flows directly into the Mississippi River. The Mississippi River is a primary drinking water source for a number of communities down-river from the site location. The area surrounding the site is primarily industrial and light commercial.

In May 1980, Illinois Environmental Protection Agency (IEPA) received notice from a local citizen that chemical waste and drums were uncovered during excavation for railroad spur at the site area. Construction workers became nauseous, but specific exposure information was not available. In May 1981, the Illinois Attorney General filed suit against the property owner, Sauget & Company, for alleged violations of IEPA regulations. The U.S. EPA Field Investigation Team (FIT) conducted a Site Screening Inspection (SSI) of Site Q. Results of soil samples collected during the SSI indicated elevated levels compounds from the priority pollutant list for volatile and semi-volatile organics were detected including 2,3,7,8-tetrachlorodibenzo-p-dioxin (or 2,3,7,8,-TCDD dioxin). In May 1988, the IEPA completed an Extended Site Investigation (ESI) of Site Q. The ESI report included analysis of historical areal photography which indicated that activities at the site started in early 1955 and was discontinued in 1975, with a marked increase in disposal activities in 1962.

In summer of 1993, pool elevation of Mississippi River waters rose beyond its flooding stage and floods occurred. Site Q area was submerged under approximately 6 feet of flood water. IEPA representative Paul Takacs performed a site inspection visit for Site Q following the floods to evaluate the conditions at the site. As a result of the floods, the integrity of Site Q landfill's riverbank had been eroded, exposing numerous buried drums. The IEPA requested the assistance of the U.S. EPA to evaluate the Site Q conditions that may warrant a removal action under the authority of Comprehensive Environmental Response Cleanup and Liability Act (CERCLA) to protect the public health and the environment.

On May 27, 1994, the U.S. EPA performed a site inspection for Site Q. The inspection revealed that flood waters eroded the landfill's riverbank area exposing approximately 12 deteriorated fifty-five gallon drums. Most of these drums contained a hard, chocolate-brown solid material. The U.S. EPA Technical Assistance Team (TAT) contractor collected three waste samples from the exposed drums. Sample results indicated the presence of polychlorinated biphenyl (PCB) in the range of 180,000 to 260,000 parts per million (ppm).

2.0 Location of hazardous substance(s)

Sauget Landfill, Site Q is a former surface/subsurface disposal

area that received municipal and industrial waste. The site is located on the eastern bank of the Mississippi River. The landfill is located between of the U.S. Army Corps of Engineers river levee and the river itself. Disposal operation at the site started in 1955 and were discontinued in late 1975. Pedestrian access to the site is unrestricted, however, vehicular access to the site is somehow restricted by a guarded gate. The site area experienced numerous floods between 1975 and 1978. The most recent flooding occurred in the summer of 1993. As a result of the 1993 flooding, the site area was inundated by Mississippi River waters. The flood waters eroded the landfill's riverbank exposing numerous deteriorated drums. Results of waste samples collected from these drums indicated the presence of PCB in the range of 180,000 to 260,000 PPM.

According to file information, the site landfill was not lined prior to disposal operation nor capped properly after closure. The buried waste is at depths in the range of one to two feet and extends to approximately 17 feet below ground level. The groundwater in the area of the site is encountered at depths in the range of 12 to 15 feet below ground level. The material that overlays the waste cell (the main body of the landfill) is highly permeable which allows rapid infiltration of most precipitation. The impact of the site on the groundwater has not been determined. Surface run-off from the site area is uncontrolled and runs into the Mississippi River. Off-site migration of hazardous substances via surface run-off was documented to have reached the sandy-beach of the river.

3. Cause of the release or discharge

In the summer of 1993, Mississippi River waters rose beyond its flooding stage and submerged the site area under approximately six feet of water. Flooding waters eroded the landfill's riverbank and exposed numerous deteriorated waste drums. The U.S. EPA performed an accelerated site assessment to evaluate threats to the public health and the environment at the site area following the 1993 floods. The assessment of the situation indicated the following:

* Flood waters heavily eroded the landfill cover material which resulted in exposing approximately 12 fifty-five gallon drums contained chocolate-brown material. Sample results of three waste samples collected from the exposed drums indicated extremely high levels of PCB in the range of 180,00 to 260,000 ppm.

* The documented PCB-contaminated waste was located approximately 100 feet west of the Mississippi River in an up-gradient position. The Mississippi River is a primary drinking water sources for numerous communities up-river and down-river from the site location. The site specific location and local geology increased the threat of off-site migration of on-site hazardous substances via surface run-off and infiltration into the shallow groundwater.

* The presence of PCB-contaminated waste near the surface was potential threat of direct exposure to workers of a nearby active business. In addition, a potential for PCB contamination to get into the foodchain and aquatic communities of the Mississippi River may have existed. According to local citizens, numerous poor people in the area rely on hobby-fishing to produce fish and shellfish for their personal consumption form the river. Overall, direct exposure threat to on-site chemicals by local population through contaminated surface soil and/or contaminated fish may have caused by the deteriorated site conditions.

4. **Efforts to locate and obtain response by responsible parties**

Sauget Landfill, Site Q is one of 12 uncontrolled hazardous waste sites that the IEPA and the U. S. EPA are jointly investigating. IEPA issued an information request to ten potentially responsible parties (PRPs) on August 7, 1989. IEPA also issued a Complaint for Injunction and Other Relief to Mosanto Chemical Company and Sauget & Company regarding the site. IEPA negotiations with above mentioned PRPs did not succeed further into a response action to cleanup the site.

No financially viable PRP was found that was willing to undertake a full cleanup action. Therefore, no orders pursuant to Section 106 of CERCLA, as amended by Superfund Amendment and Reautorization Act (SARA), were issued. On May***, 1994, the U.S. EPA issued a Notice Letter pursuant to Section 107(a) of CERCLA to ??? requesting participation in a removal activities at Site Q.

>>>>>>>>>>><<<<<<<<<<<*********<<<<<<>>>>>>><><><><><><><><

JUMP_START FOR NEXT :

Talk about PRPs received 104(e). (dates & Names)
Talk about 107(a) General Notice Of Liability. (Date & Names).

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>

B. **Organization of the Response**

Removal activities at Sauget Landfill, Site Q were conducted in two phases. Phase I was an extent of contamination study in order to determine the appropriate removal procedure. During this phase, the U.S. EPA TAT contractor collected approximately one-hundred and ten soil samples from the site area and the sandy-beach of the Mississippi River. Soil samples were collected according to the U.S. EPA Office of Solid Waste and Emergency Response (OSWER) document No. EPA 560/5-86-017, Field Manual for Grid Sampling of PCB Spill Sites, and its companion document No. EPA 560/5-85-026. Phase II of the removal activities included removal and off-site disposal of approximately 311 tons of PCB-contaminated soil.

U.S. EPA On-Scene Coordinator Samuel Borries coordinated removal activities with IEPA site-representatives Kim Hubbard and Pual Takacs from Springfield office. Other participants in the removal actions are included in the Summary Of Response Organization, Table 1-B of this report.

C. **Injury or Possible Injury to Natural Resources**

1. **Content and time of notice to natural resources trustees**

According to the National Oil Pollution and Contingency plan (NCP), Section 415 Part 300.5, "natural resources" means land, fish, wildlife, biota, air, water, and groundwater belonging to or held in trust by, or controlled by the United States. The U.S. EPA OSC, Samuel Borries, sent pollution reports detailing the situation and the progress of the cleanup activities at the site to the U.S. Department of Interior Natural Resources Trustee Officer for Region V, Donald Henne. Pollution reports were also sent to the Peoria, Illinois office of the U.S. Fish and Wildlife Services.

2. **Trustee damage assessment and restoration activities**

At the time of preparation of this report, no follow-up action was initiated by the trustees mentioned above.

- Discovery
- Assessment
- Start of Removal

ADD Table Response Organization

ORGANIZATION OF RESPONSE TABLE.

D. Chronological Narrative of the Removal Activities

1. Threat abatement actions taken

The U.S. EPA Region V office, supported by TAT contractor, Ecology and Environment, Inc., conducted a site assessment for Sauget Landfill, Site Q. Conditions at the site were evaluated according to Section 300.415 (b) Paragraph (2) of the NCP. Accordingly, threats to the public health and the environment were documented at the site. The U.S. EPA Office of Superfund approved an Action Memorandum (AM) for a Time-Critical removal action at Site Q on September 22, 1994. Removal activities at Site Q conducted under the authority of CERCLA 104(a) which started on February 20, 1995, and were completed on May 31, 1995. Removal actions were conducted in two phases. Phase I included the collection of one-hundred and ten soil samples from the site area and the west-bank of the Mississippi River parallel to the site property to verify the extent of contamination. Phase II of the removal actions included the removal and off-site disposal of approximately 111 tons of PCB-contaminated soil and debris, and construction of clay cap over the troubled area. The following is a detailed discussion of the removal actions for both removal phases:

1.1 Phase I removal actions

On February 20, 1995, the U.S. EPA Region V mobilized the Emergency Response Cleanup Services (ERCS) contractor, Riedel Environmental Services, Inc., and Region V TAT contractor to commence Phase I of the removal actions (extent of contamination study) at Site Q. The site area was divided into two sections: Landfill Bank (LB) and the Beach Area (BA) for sampling purposes. The U.S. EPA TAT contractor collected one-hundred and ten soil samples from both areas. Soil samples were collected according to hexagonal-grid pattern as recommended in TSCA document No. EPA-560/5-86-017 and its companion document No. EPA-560/5-85-026. Soil samples were screened at site using immunoassay PCB field screening kits. Off-site laboratory analysis were performed for approximately 15% of all collected samples. Laboratory analysis confirmed approximately 86% of screening results. ~~Field screening and laboratory confirmation analysis are presented in Table 1-D~~. Overall, extent of contamination phase indicated the following facts:

* Levels of PCB in the Landfill Bank area were in the range of 63 to 3,036 ppm. Levels of PCB in the beach front of the site were in the range of 3 to 84 ppm.

* Most of the exposed drums contained chocolate-brown solid martial. Results of waste samples ~~collected from~~ the brown material indicated ~~the presence of PCB at 11,500 ppm level~~.

* PCB contamination covered an area of 40,000 cubic feet that extended from the landfill bank to the Mississippi River shoreline.

The U.S. EPA OSC determined cleanup levels for the site as the following:

* PCB cleanup level for the landfill bank area was 25 ppm pursuant to Coded Federal Regulation (40 CFR) Section 761 Part 123 through 125. The area of the site was low-contact restricted industrial area.

* PCB cleanup level for the beach area was recommended by the U.S. Fish and Wildlife Services to be 1.2 ppm. According to U.S.

Fish and Wildlife experts, aquatic communities and bottom-dweller of the Mississippi River will not suffer a chronic or short-term acute effects of exposure to PCB at 1.2 ppm level or lower.

Excavation of contaminated soil and debris started shortly after completing extent of contamination study. The soil was staged in disposal boxes in preparation for ~~Phase II of the removal actions (~~disposal~~ phase~~. The U.S. EAP TAT contractor collected ten verification soil samples following the excavation of approximately 200 tons of contaminated soil. Verification samples, three samples from the landfill bank, four samples from the beach area, and three sediment samples from the river, were forwarded for off-site laboratory analysis. Sediment samples were collected ~~from the river to~~ evaluate the impact of the site and/or on-site removal activities on the river sediments. ERCS and TAT contractors were mobilized off-site on February 26, 1995, while finalizing disposal arrangements at an ~~off-site~~ facility.

TSCA approved

awaiting sample analysis results and

1.2 Phase II removal actions

Results of verification samples collected during Phase I of the removal actions were available on March 6, 1995, which indicated that PCB contamination at levels greater than the 25 and 1.2 ppm cleanup levels for the respective areas still exist. Sample results are presented in Table ~~2~~.

D-1

On March 20, 1995, the U.S. EPA mobilized ERCS and TAT contractors to Sauget Landfill, Site Q. Upon arrival, it was discovered that the site area had experienced heavy rainfall during the demobilization period and the Mississippi River waters covered the contaminated portion of the beach front. During the period of March 20 - 29, 1995, ERCS contractor excavated an additional 111 tons of PCB-contaminated soil from the contaminated grids of the landfill bank area. On March 29, 1995, the TAT contractor collected five soil samples to verify the effectiveness of the last round of excavation. Results of the five verification samples indicated that levels of PCB in the landfill bank area were in the range of 1 to 24 ppm (see Table ~~2-3~~). The total amount of soil excavated was approximately 311 tons which was transported by rail using "*intermodel boxes*" to Envirosafe of Idaho, Inc., in Messel Base, Idaho (~~TSCA approved~~). A waste disposal summary is presented in Table ~~2-5~~ of this report. The excavation was then backfiled with approximately 280 tons of clean soil (containing less than 1 ppm PCB by weight, 40 CFR 761.129). The backfiled area was cover with approximately 3-inch layer of rip-rap gravel to minimize future erosion by precipitation and surface run-off. Following the completion of all removal actions at the Site Q, ERCS and TAT contractors were mobilized off-site on March 31, 1995, to Sauget Landfill, Site G, approximately 1½ miles east of Site Q location.

D-3

D-2

demobilized.

2. Treatment, disposal, or alternative technology approaches pursued

Off-site disposal of PCB-contaminated soil and debris at a TSCA-approved facility was chosen favorably over other options due to the following reasons:

* Concentration of PCB present in the soils of Site Q was judged to be extremely high for treatment technologies available on the market.

* Due to time strain (Time-Critical Removal) situation, off-site disposal was proven to be timely-efficient. Other treatment technologies would have required time for preparation, treatability studies, and setup.

ASD Table First round Samples

D-2

Waste Disposal Summary Table

* The waste plume was close to the water-table and water-shed of the Mississippi River. Most treatment technologies, other than off-site disposal, have tendency to break-down under wet conditions.

3. Public information and community relation activities

On February 17, 1995, the U.S. EPA OSC informed property owners and nearby business in the site area of the upcoming removal actions Removal activities at the site were low-key issue to the residents of that industrial area. No formal community relation plan or program was established for the site. However, the U.S. EPA OSC, Samuel Borries, maintained a positive rapport with the IEPA representatives and local authorities.

The U.S. EPA Office of Public Affaire published and distributed a "News Release" on May 15, 1995, detailing the removal action that took place at the site and the current situation. A copy of the release can be found in Appendix No. 1-G of the site files.

E. Resources Committed

The U.S. EPA provided all monetary resources for the removal actions at the Sauget Landfill, Site Q. The ERCS contractor for this removal was Riedel Environmental Services, Inc., under Delivery Order (DO) No. 5001-05-365. The TAT contractor for this removal was Ecology and Environment, Inc., under Technical Directive Document (TDD) No. T05-9502-010. Removal actions started on February 20, 1995 and were completed on March 31, 1995, for a total cost of $184,589.73 of which $139,348.13 was for services provided by ERCS. A breakdown of all contractors expenditures into major categories of labor, equipment, material, and disposal is shown in Table 1-E.

II. EFFECTIVENESS OF REMOVAL ACTIVITIES

A. Actions Taken by PRPs

AWAITING OSC INFORMATION REGARDING 104(e) AND/OR 107(a)

B. Actions by State and Local Agencies

The IEPA made the initial discovery of the site and worked jointly with the U.S. EPA OSC. The IEPA provided support and contributed to the removal efforts by providing historical and file information about the site. File information included site ownership and previous sample analysis which was later used to issue General Notice of Liability letters and other technical planning at the site. The IEPA provided a dedicated staff-member to be the site-representative.

Actions Taken by Federal Agencies and Special Teams

The U.S. EPA provided all monetary resources and technical expertise for the removal actions at Sauget Landfill, Site Q. The U.S. Fish and Wildlife Services provided a substantial support for the removal actions by providing expertise on PCB cleanup levels for the beach-front area of the site. According to the U.S. Fish and wildlife experts, at the recommended 1.2 ppm cleanup level no chronic and/or acute short-term adversal effects will occur to the aquatic communities of the Mississippi River.

Cost Summary Table

D. Action Taken by Contractors, Private Groups, and Volunteers

1. Riedel Environmental Services, Inc., Region V ERCS contractor

OSC to provide

2. Ecology and Environment, Inc., Region V TAT contractor

The Technical Assistance Team Contractor provided timely assistance in preparing and maintaining the overall health and safety plan, performing quality air monitoring, and documenting on-site activities. The utilization of the EPA-approved immunoassay field screening for PCB in soil provided the removal budget with monetary savings. Field screening provided timely sample analysis of quality assurance (QA) Level 1 which was later upgraded to a defensible QA Level 2 by off-site laboratory confirmation analysis. The TAT contractor developed a quality assurance sampling plan in accordance with TSCA recommended hexagonal sampling design. According to TSCA experts, the hexagonal-grid sampling has a 98% better chance of detecting PCB contamination above action level and/or an established cleanup ~~level~~ goal.

III. DIFFICULTIES ENCOUNTERED

A. Items That Affected the Response

Below-grade Terrain: The gradient of the landfill bank area was greater than 45° inclination which limited heavy-equipment activities on the surface of the site. To counter below-grade surface, ERCS used along-reach excavator which has a reach-span of approximately 50 feet.

Heavy Rain: Heavy rainfall during the period of February 26 through March 20, 1995, the site area experienced heavy rainfall which caused the Mississippi River waters to rise and cover the remaining contaminated portion of the beach area following Phase I of the removal actions.

B. Issues of Intergovernmental Coordinations

Effective coordination: The U. S. EPA OSC and experts from the U.S. Fish and Wildlife coordinated efficiently to establish a PCB-cleanup level for the contaminated beach area. U.S. Fish and Wildlife experts recommended a 1.2 ppm PCB cleanup level at which no chronic or acute short-term exposure effect by aquatic communities of the Mississippi River should occur. Cooperation was conducted in a timely manner which enabled the timely completion of the removal actions.

Transpostation of waste via rail: Disposal operations were hampered by the continueous change of paperwork requirements by the local railroad carrior. These administartive requirements were above and beyond those encated by the U.S. Department of Transporation. There should be a **Memorandum of Understanding** between the U.S. EPA and U.S. Railroad Federation to simplifiy transportation of hazardous waste via rail which, in return, can provide future removal budgets with substantial monetary savings.

C. Difficulties Interpreting, Complying With, or Implementing Policies and Regulations

Low-bid vendor policy: Vendor for "intermodle" boxes was chosen on the lowest bid solicited by ERCS. Equipment and boxes provided by this vendor were defective which required time and labor from ERCS contractor to

get these boxes in an operational condition. Overall, the actual cost of services provided by the lowest-bider was comparable to similar services that could have been provided efficiently and in a timely manner by a higher bider.

No other policies and/or regulations applicable to the cleanup of PCB-contaminated sites affected the efficient conduct of the removal action at Sauget Landfill, Site Q.

IV. RECOMMENDATIONS

A. Means to Prevent a Recurrence of Discharge or Release

Pre-flood evaluation: There should be a data-base of uncontrolled hazardous waste site that are located in floodplains of rivers and streams in this region. A pre-flood evaluation of site integrity could result in an adjustment action to stabilizes site condition prior to floods until future action is planned and executed. The data-base can be prepared by State and local authorities in cooperation with the U.S. EPA. Such data-base can eliminated costly cleanups after floods occur.

B. Means to Improve Removal Activities

Field screening for PCBs: The use of EPA-approved immunoassay field screening for PCB can efficiently reduce the analytical cost of the removal actions. During the course of the removal actions, the TAT contractor collected approximately one-hundred and ten soil samples to determine the extent of contamination and verify the attainment of cleanup levels. All samples were screened using immunoassay test kits. Verification of field screening results was performed on approximately 15% of the screened samples at an off-site laboratory. Laboratory analysis confirmed approximately 85% of field screening results. Overall, field screening provided quality sample analysis with quick turn-around-time and approximately $8,800.00 in monetary savings.

C. Recommendations for New Policy or Regulations, and Changes in Current Regulations and Response Plans

Bid soliciting policy: Procuring services through bidding procedure for a removal action should not follow the "lowest-bid policy". Bid analysis for award process should be based on cost, quality, timely delivery, and ability to adopt quickly to changes that may occur to enable timely completion of the removal actions.

All other policies and regulation observed for the cleanup of Sauget Landfill, Site Q were practical and no change is recommended.